# Multi-contracting in offshore wind to pave the way for project finance?

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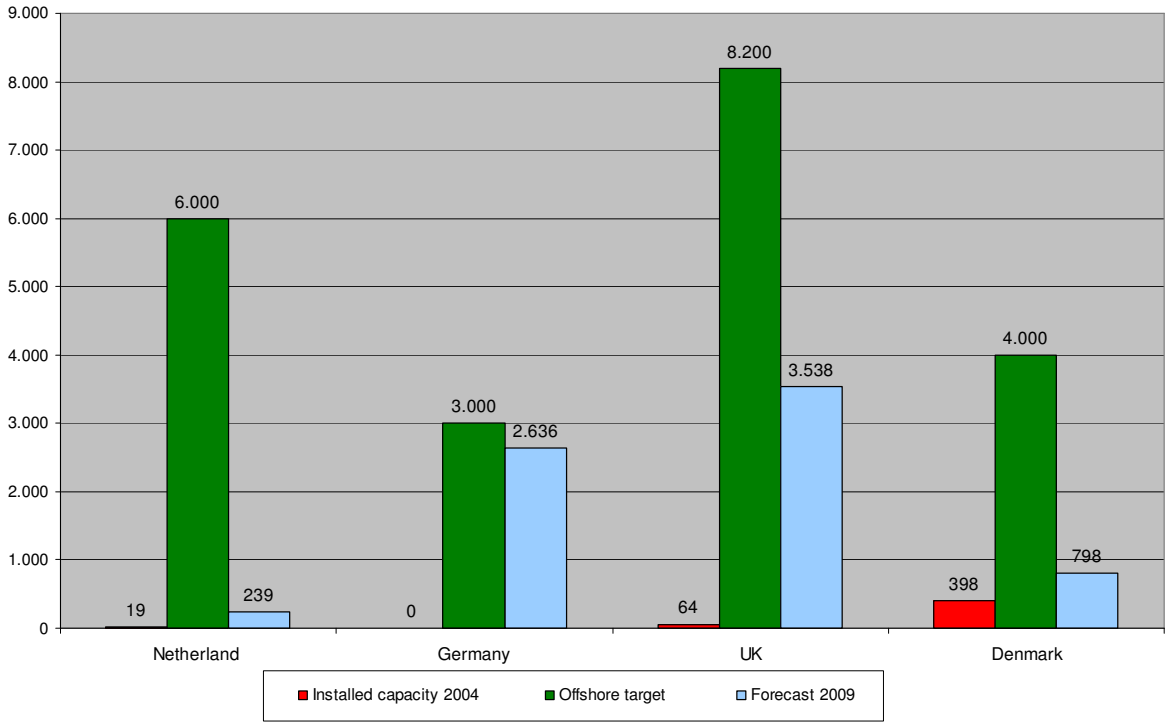
# Targets for offshore wind in selected countries are indeed very substantial



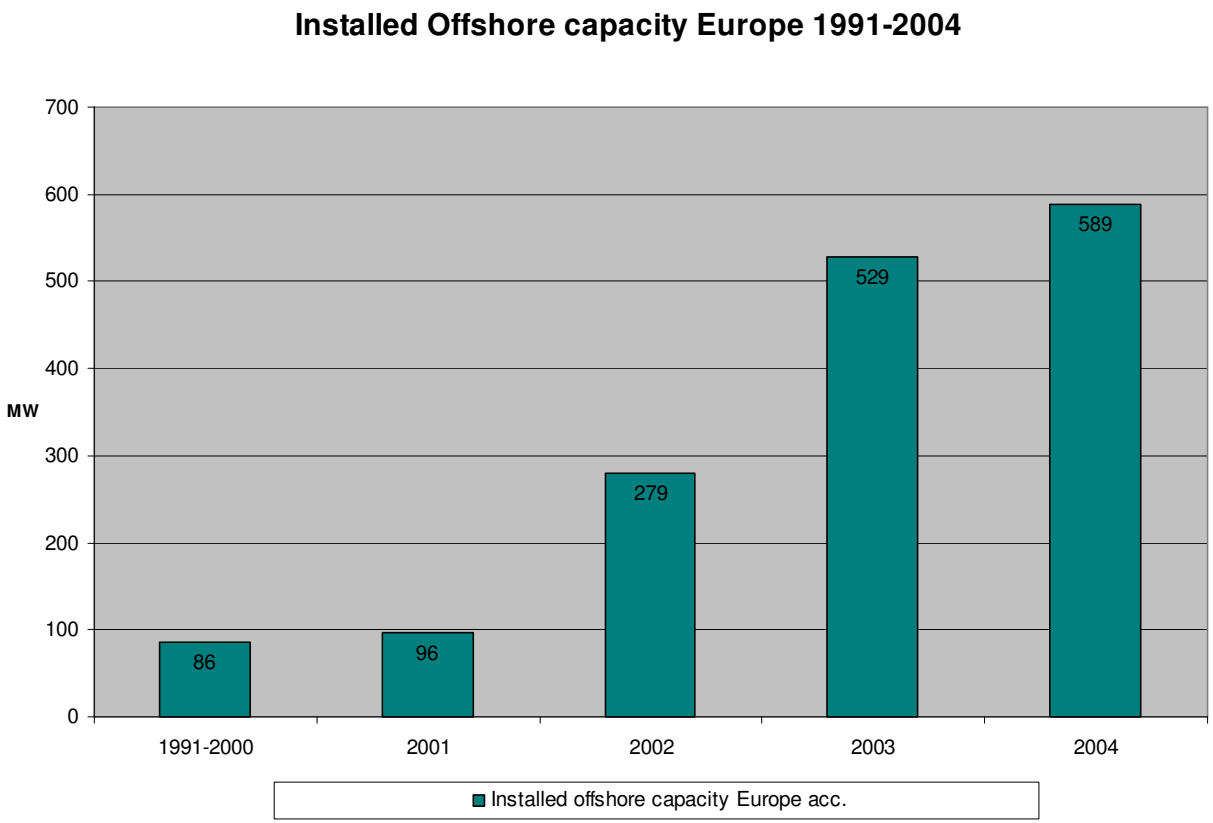

- **EWEA's target for EU in 2010 is**
  - 10,000 MW offshore
  - 75,000 MW in total
- **The Netherlands** has a target for 6,000 MW in 2020
- **Germany's** target for 2010 is 3,000 MW
- In the **UK** over 1,000 MW of projects has planning consent. Another 7,200 MW offshore projects are planned
- **Denmark's** offshore target for 2030 is 4,000 MW

**The short term forecast from BTM indicates that only a few percentage of the expected offshore wind farms will come online before 2009**

Source: BTM World Market Update March 2005, www.offshorewind.de, www.ens.dk

# The boom in capacity built is further delayed…

- **The current installed offshore capacity world wide is 589 MW (end 2004)**




- **Countries with offshore capacity**
  - Denmark, Sweden, The Netherlands, Ireland and the UK
- **The offshore "rush" in Germany**
  - Two years ago it was expected to come in 2006-07, now take off is expected in 2008-2009

Source: BTM World Market Update March 2005, www.bwea.com

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# Barriers to continued development

- **Consents**
  - The consenting process takes longer than expected
    - E2's experience from UK indicates that it takes a year from the submission of the application to consent is given and another year is added if a public inquiry is required. It took 3 years to complete the application for London Array
    - In Germany, projected consenting time has gone from 15 months to now 25 months
- **Uncertainty about long term political support**
  - The subsidy regime is only applicable for a short number of years
    - In Sweden and Italy the subsidy regime is only in force until 2010
    - In the UK the renewable obligation increases the target until 2015
  - The risk of loosing political support after an election
    - In Germany, in connection with the election 18 September, some parties have mentioned the possibility of replacing the EEG with a green certificate market

Source: European Wind Power Markets and strategies, EER; Renewable Energy Country Attractiveness indices summer 2005, E&Y; BTM World Market Update, March 2005

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# Barriers to continued development

- **Proven technology**
  - The development of new larger offshore turbines goes fast. Investors want to improve the feasibility of the projects by using unproven technology. A conflict occurs with the banks' demand for proven technology.
- **Supply chain issue**
  - Lack of competition – projects are getting bigger and investors insist that suppliers get more involved in the project and provide long-term guarantees – only a few suppliers are willing to take such responsibilities. Substantial long-term guarantees inhibit growth of suppliers' business.
- **Grid issues**
  - Final sums liability. In the UK, National Grid's principle "invest then connect" troubles the developers, as it forces them to provide significant guarantees very early in the development phase before consent is secured.
  - Lack of grid capacity means long lead times for connections
- **Lack of financing**
  - No projects have so far received non-recourse construction finance. Even though there are advantages in building offshore, the costs and risks are larger.
  - Banks are focusing on reliable offshore turbines and one stop EPC contracts backed by big balance sheets

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# E2's approach to offshore wind projects

- E2 approaches the challenges on the market by focusing on
  - Multi-contracting
    - places the risk with those able to handle it
    - encourages competition on individual supplies
    - provides synergy effects across projects
    - provides engineering with a great insight into the project
    - makes it possible to select the most well designed turbine and supporting supplies
    - results in an overall cost reduction
  - In-house integration engineering
    - E2 integrates in-house know-how and experience in the development process of new offshore turbines through a demonstration turbine project, where E2 in cooperation with suppliers erect large turbines on land, where they are tested and adjusted to minimize the construction, logistical and operational risks
    - Makes unproven technology proven
    - Early involvement of the O&M organisation
  - In-house risk management
    - When building offshore the weather window is sometimes very narrow. E2 typically plans to build offshore projects during two seasons to avoid the risk of delays.
  - Overall project management

**E2 used these principles in connection with the development and construction of Nysted Offshore wind farm, which was delivered within budget and on time**

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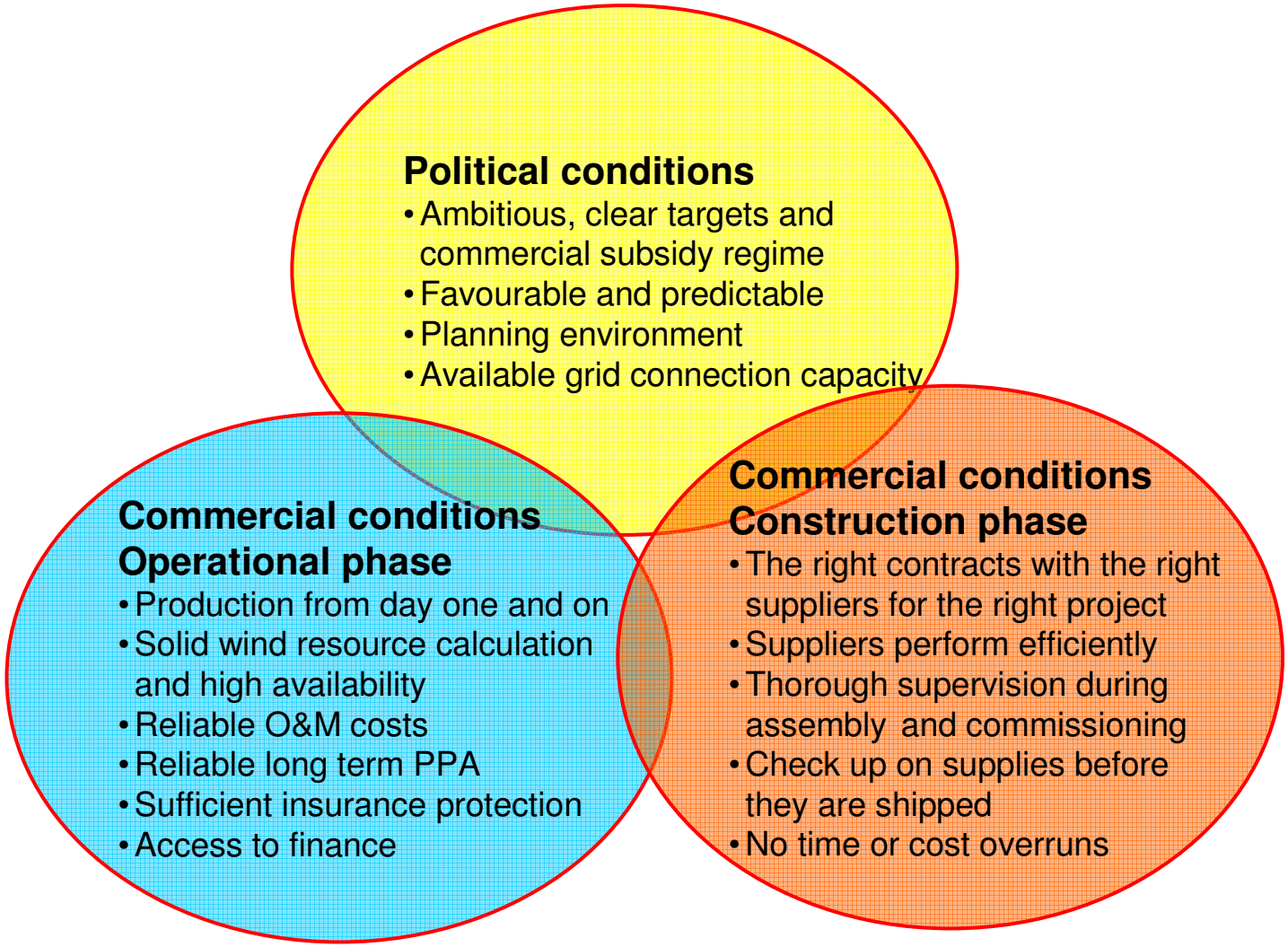
# How to pave the way for take off in the offshore wind market




**These conditions call for developers/owners with significant self-involvement and extensive competencies – MULTI-CONTRACTING?**

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# Partnership with stakeholders including lenders

- We have evidence that offshore projects like Nysted are capable of delivering the projected results

- Current issues on this background:
  - How do suppliers see their future role and position (delivery ex works)?
  - How is capacity and competition in the offshore supply chain secured?
  - How do lenders interact with developers to promote reduction of risks and reach sanction of projects?
  - Are soft loans, export credits or institutional investors a possibility?
  - Are the banks willing to share the risks together with competent developers/investors?
  - Project financing, including the construction phase is well established onshore, so why not offshore?

**E2 calls for banks who are willing to build up competences to understand the risks in offshore wind projects and work with investors with profound knowledge within offshore technology to ensure commercial success**

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# reNews 26 August 2005

## Offshore crisis as turnkey duo pulls the plug

The UK offshore wind industry has been plunged into crisis by the shock collapse of contract negotiations to construct the two largest consented round one farms, Centrica's Lynn and Inner Dowsing and Eon's Solway Firth.

In both cases advanced talks with preferred contractors have been called off after a failure to agree on price and the related issue of risk.

A raft of pre-selected or potential subcontractors was told last week and many expressed deep dismay. "It is a disaster. I am very disappointed. There needs to be a fundamental change to the way this so-called industry does its contracting," one senior source told reNews.

Sources suggest Siemens, which has been in the position of preferred bidder since May or even earlier on the 60-turbine Lynn and Inner Dowsing scheme, has informed Centrica it is no longer interested in the full turnkey contract.

This extraordinary situation comes even though sources say the contract, valued at up to £250 million, was all-but signed in the spring.

It is understood the reasons cited for the turbine manufacturer's withdrawal include the current rapid growth of its wind business, doubts over subcontractors and changes in the market in general.

Sources say Siemens may have left supply of its 3.6MW turbine on the table but has made it clear it is no longer interested in the turnkey provision that encompasses what many believe is a difficult balance of plant scope.

Centrica said: "A number of difficulties have recently been encountered as both parties sought to conclude the award. Unfortunately, despite every effort being made to resolve these issues, we have been informed by the prospective contractor that it is not able to progress to conclusion.

"We have turned our attention to other parties and expect to re-commence discussions with these parties as soon as possible."

- The development in the offshore market indicates changes in the present turnkey basic contract

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**Thank you for your attention!**